

ABSTRACT OF THE DISCLOSURE

2 A modem suitable for transmitting encrypted data over voice-grade telephone line.
3 The modem is implemented by the combination of integrated circuit components including
4 a microprocessor, a serial communications controller which communicates with connected
5 data terminal equipment, and a modulator/demodulator for translating between voice band
6 tone signals and digital data. Pseudo random number generators are employed at both the
7 transmitting and receiving stations to supply identical sequences of encryption keys to a
8 transmitting encoder and a receiving decoder. An initial random number seed value is
9 made available to both stations. The random number generators are advanced at times
10 determined by predetermined characteristics of the data being transmitted so that, after
11 transmission has taken place, the common encryption key can be known only to the
12 transmitting and receiving stations.